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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,961	07/03/2003	Shinji Yokono	Q76454	3574
23373	7590	09/11/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			LIN, JAMES	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,961

Applicant(s)

YOKONO ET AL.

Examiner

Jimmy Lin

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 9-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/23/03, 7/14/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-8 in the reply filed on 7/26/06 is acknowledged.
2. Claims 9-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/26/06.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 6-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites "one of said plurality of phosphor materials is excited and emits light of one of said plurality of colors" and "a plurality of inspection steps corresponding to said plurality of colors of excited lights emitted from said plurality of phosphor materials". It is indefinite if the radiated light of claim 1 causes the phosphor material to become excited and emit light or if the recitation is merely describing the capabilities of the phosphor material. For the purpose of applying art, the claim will be interpreted to be inclusive of both.

Claim 7 recites "wherein said light is light having a wavelength range so as to be able to prevent said phosphor material from being excited and emitting light". It is unclear how the phosphor material can be prevented from being excited when a light is radiated onto the phosphor. For the purpose of applying art, the claim will be interpreted as a light radiated onto the phosphor material without exciting the phosphor material and without the phosphor material emitting light.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

Art Unit: 1762

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for radiating light onto the phosphor material so as not to make the phosphor material excited and emit light, does not reasonably provide enablement for radiating light onto the phosphor material to cause the phosphor material to become excited and emit light while the radiated light is reflected and the reflected light is observed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Claim 6 recites "one of said plurality of phosphor materials is excited and emits light of one of said plurality of colors" and "a plurality of inspection steps corresponding to said plurality of colors of excited lights emitted from said plurality of phosphor materials". These limitations contradict the specification, wherein the specification teaches "visible light 14 is configured to have a wavelength so as not to make phosphors of the phosphor paste 5a excited and then emit light" (pg. 22, lines 2-7).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fitzpatrick (U.S. Patent 4,755,752) in view of Iguchi et al. (WO 9827570; references made are to the English equivalent U.S. Publication 2002/0009536).

Fitzpatrick teaches a method of inspecting a substrate comprising of an electroluminescent panel. A light source 30 radiates light 32 onto the substrate and a viewer 43 is used to capture the reflected light and to detect flaws (abstract; col. 3, line 56 – col. 4, line 14; col. 5, lines 44-47; Figs. 2a,6a-6b)

Fitzpatrick does not explicitly teach forming barrier ribs on a surface of an insulating substrate and applying a phosphor material in the form of a paste to the substrate. However, Iguchi teaches a method of making plasma display panel (PDP) (i.e., a type of electroluminescent panel), wherein phosphor paste is applied between barrier ribs on a substrate (abstract; Fig. 1). The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have formed barrier ribs and to have applied a phosphor material between the ribs on the substrate of Fitzpatrick in order to form an electroluminescent panel with a reasonable expectation of success because Iguchi teaches that such methods are suitable for making an electroluminescent panel.

Fitzpatrick does not explicitly teach radiating the light onto the surface of the phosphor material prior to drying the phosphor material. However, the selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results. See, for instance, *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have radiated the light onto the phosphor material prior to drying instead of radiating the light onto the phosphor material after drying with the expectation of similar results and with a reasonable expectation of success because the detection of flaws is possible before or after drying the phosphor material.

Claim 7: Fitzpatrick and Iguchi are silent as to whether the visible light radiated onto the phosphor material causes the phosphor material to become excited and emit light. The Applicant

teaches that at least certain wavelengths of visible light do not excite the phosphor material (pg. 22, lines 2-7).

Claim 8: Iguchi teaches that the phosphor paste can be applied by a printing technique (Figs. 1,5-8).

10. Claims 1 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iguchi et al. '570 in view of KR 1999-85889 (hereafter '889) and Fitzpatrick '752.

Iguchi discloses a method of making a PDP, wherein phosphor paste is printed between barrier ribs, as discussed above.

Iguchi does not explicitly teach an inspection method. However, '889 teaches a method of inspecting a PDP, wherein an inspection steps takes place after the printing of each phosphor R, G, and B. If the printed condition of the phosphor is determined to be poor, the phosphor material is removed. The substrate (i.e., a subsequent substrate) is returned to the beginning of the process to reprint the phosphor materials (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have inspected the phosphors of Iguchi using the inspection method of '889. One would have been motivated to do so in order to increase the production yield and reduce the manufacturing cost of PDPs (abstract).

'889 teaches that some sort of inspection is required to determine the condition of the printed phosphor, but does not explicitly teach that inspection method comprises radiating light onto the surface of the phosphor and observing the reflected pattern of light reflected. However, Fitzpatrick teaches that such a method for inspecting an electroluminescent panel is obvious, as discussed above. The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have inspected the phosphors of '889 using the method of Fitzpatrick with a reasonable expectation of success because Fitzpatrick teaches that such inspection methods are suitable for detecting flaws in electroluminescent displays.

Iguchi, '889, and Fitzpatrick do not explicitly teach that the phosphor is inspected before drying. However, the selection of any order of performing process steps is *prima facie* obvious

in the absence of new or unexpected results. See, for instance, *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946). Changing the order of steps is obvious, as discussed above.

Claim 6: '889 teaches that an inspection step takes place after the application of each of the phosphor materials R, G, and B (abstract).

The phosphor materials are capable of being excited and emit light, such as during the conventional use of a plasma display panel.

Claims 7-8 are rejected for substantially the same reasons as discussed above.

11. Claims 1 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iguchi et al. '570 in view of KR 1999-85889 (hereafter '889) and Nishiyama et al. (U.S. Patent 6,797,975).

Iguchi discloses a method of making a PDP, wherein phosphor paste is printed between barrier ribs, as discussed above.

Iguchi does not explicitly teach an inspection method. However, '889 teaches that inspecting printed phosphors in the art of PDPs is obvious, as discussed above.

'889 teaches that some sort of inspection is required to determine the condition of the printed phosphor, but does not explicitly teach that inspection method comprises radiating light onto the surface of the phosphor and observing the reflected pattern of light reflected. However, Nishiyama teaches that a PDP can be inspected for pattern defects using white light (i.e., radiating the white light onto the surface and observing the reflected light) (col. 5, lines 7-50). The selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have inspected the phosphor of Iguchi and '889 using the method of Nishiyama with a reasonable expectation of success because Nishiyama teaches that such an inspection method is suitable for detecting pattern defects.

Iguchi, '889, and Nishiyama do not explicitly teach that the phosphor is inspected before drying. However, the selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results. See, for instance, *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946). Changing the order of steps is obvious, as discussed above.

Claim 2: Nishiyama teaches that an image of the reflected light can be captured (col. 6, lines 18-24).

'889 teaches that each of the printed phosphor material of the same color is inspected before continuing to the next process step. Iguchi teaches that the phosphor material of the same color can be printed into multiple cells simultaneously, thereby requiring the inspection of every cell. Therefore, the images of each cell must necessarily be distinguished from one another in order to determine the printed condition of each phosphor material in each cell.

Because this inspection of pattern defects is performed prior to drying the phosphor material, the inspection will necessarily determine whether or not a phosphor layer formed by drying the phosphor material will normally be formed. Any pattern defects in the phosphor material prior to drying will carry over into the dried state.

Claim 4: Nishiyama teaches that the inspection method can detect pattern defects, as discussed above.

Claims 5-8 are rejected for substantially the same reasons as discussed above.

Allowable Subject Matter

12. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The applied references do not reasonably teach that the inspection method using visible light comprises determining whether an amount of phosphor material applied is suitable, excessive or small.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Thursday 8 - 5:30 and Friday 8 - 4:30.

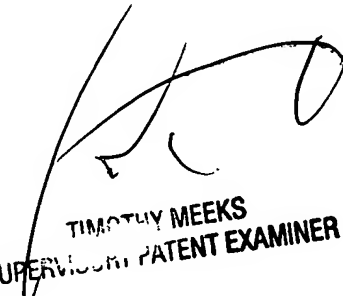
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JL


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